

Trophic Levels

A step in a food chain or web is called a **trophic level**

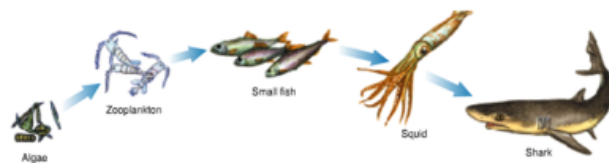
Producers (1st level) plants, trees, grass

Consumers (2nd – 4th level)

Primary grasshopper

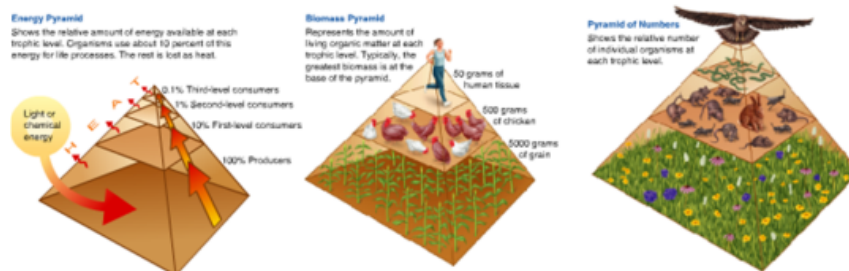
Secondary frog

Tertiary snake



Ecological Pyramids

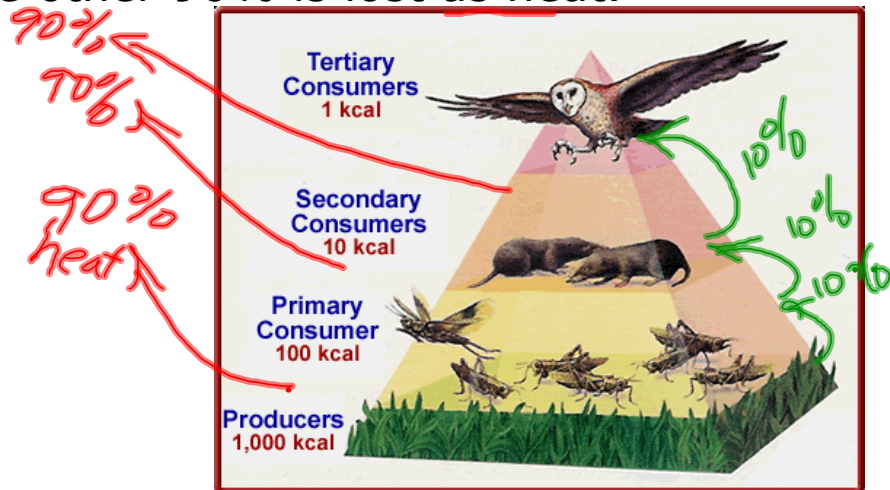
An ecological pyramid is a diagram that shows the relative amounts of energy or matter contained within each trophic level in a food chain or food web.



Energy Pyramid

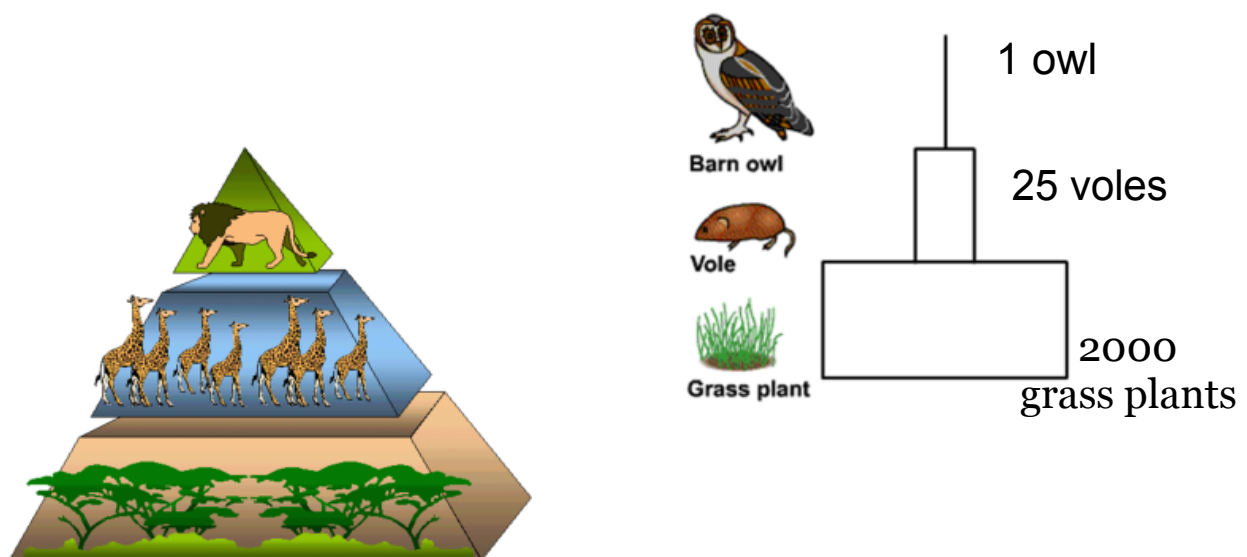
10% rule- as you go up the pyramid, only 10% of the energy is transferred to the organisms in the next level.

The other 90% is lost as heat.



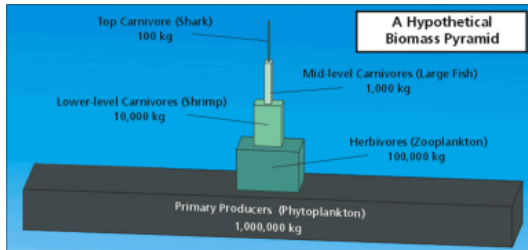
Numbers Pyramid

Shows the number of organisms at each trophic level per unit area of an ecosystem.

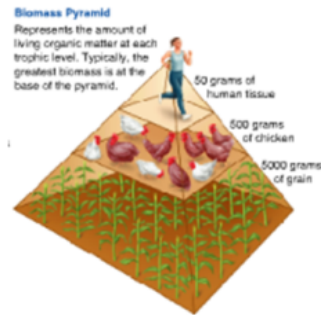


Biomass Pyramid

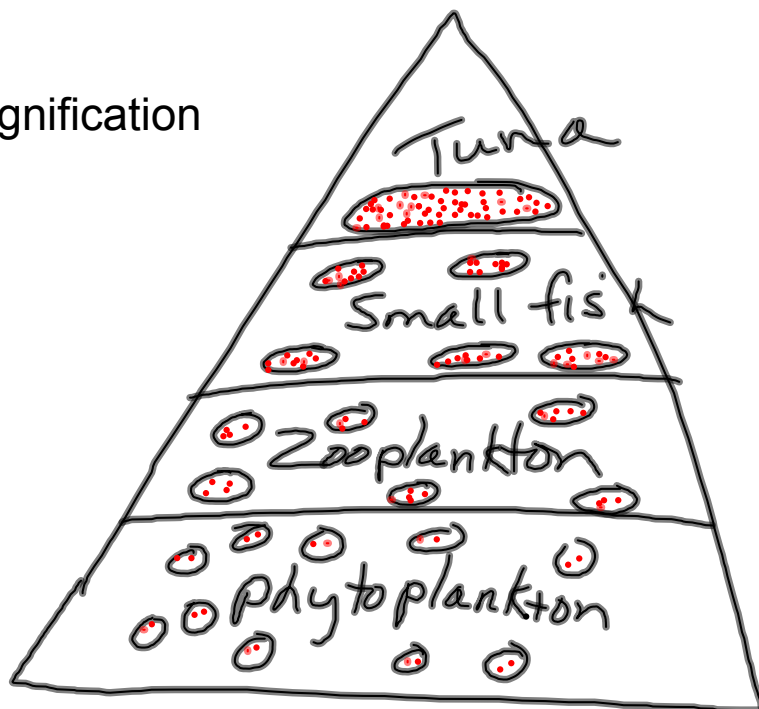
Biomass- The total amount of living tissue in each trophic level. It represents the total amount of potential food available.



Biomass Pyramid



Biomagnification



$\cdot = 10\mu\text{g}$
mercury